

**IN THE CLAIMS:**

1. (CURRENTLY AMENDED) An image data processing apparatus comprising:  
a dividing unit that divides image data into a plurality of blocks;  
a block extracting unit that extracts a pair of blocks from the divided blocks;  
an index extracting unit that extracts two feature indices of a first color component and two feature indices of a second color component which differs from the first color component from the pair of blocks, one of the two feature indices being extracted from one of the pair of blocks and the other of the two feature indices being extracted from the other of the pair of blocks; and  
a code embedding unit that embeds a code into the pair of blocks, by changing at least one of the extracted two feature indices of the first color component of the pair of blocks based on a magnitude relationship between the extracted two feature indices of the second color component of the pair of blocks and a value determined by at least one of the extracted two feature indices of the second color component.

2. - 3. (CANCELED)

4. (ORIGINAL) The image data processing apparatus according to claim 1, wherein the first color component is a yellow component.

5. (ORIGINAL) The image data processing apparatus according to claim 4, wherein the second color component is a magenta component.

6. (ORIGINAL) The image data processing apparatus according to claim 1, further comprising a code extracting unit that extracts the code embedded into the image data.

7. (CURRENTLY AMENDED) An image data processing method comprising:  
dividing image data into a plurality of blocks;  
extracting a pair of blocks from the plurality of blocks;  
extracting two feature indices of a first color component and two feature indices of a second color component which differs from the first color component from the pair of blocks, one of the two feature indices being extracted from one of the pair of blocks and the other of the two feature indices being extracted from the other of the pair of blocks; and  
embedding, using a processor, a code into the pair of blocks of the image data, by

changing at least one of the extracted two feature indices of the first color component of the pair of the blocks based on a magnitude relationship between the extracted two feature indices of the second color component of the pair of blocks and a value determined by at least one of the extracted two feature indices of the second color component.

8. - 9. (CANCELED)

10. (ORIGINAL) The image data processing method according to claim 7, wherein the first color component is a yellow component.

11. (ORIGINAL) The image data processing method according to claim 10, wherein the second color component is a magenta component.

12. (ORIGINAL) The image data processing method according to claim 7, further comprising extracting the code embedded into the image data.

13. (CURRENTLY AMENDED) A computer-readable recording medium that stores a computer program that, when executed by a computer, makes a the computer perform a process comprising:

dividing image data into a plurality of blocks;

extracting a pair of blocks from the divided block;

extracting two feature indices of a first color component and two feature indices of a second color component which differs from the first color component from the pair of blocks, one of the two feature indices being extracted from one of the pair of blocks and the other of the two feature indices being extracted from the other of the pair of blocks; and

embedding a code into the pair of blocks of the image data, by changing at least one of the extracted two feature indices of the first color component of the pair of blocks based on a magnitude relationship between the extracted two feature indices of the second color component of the pair of blocks and a value determined by at least one of the extracted two feature indices of the second color component.

14. - 15. (CANCELED)

16. (PREVIOUSLY PRESENTED) The computer-readable recording medium

according to claim 13, wherein the first color component is a yellow component.

17. (PREVIOUSLY PRESENTED) The computer-readable recording medium according to claim 16, wherein the second color component is a magenta component.

18. (PREVIOUSLY PRESENTED) The computer-readable recording medium according to claim 13, further making the computer perform extracting the code embedded into the image data.

19. - 20. (CANCELED)

21. (CURRENTLY AMENDED) An embedding unit that is included in an image data processing apparatus which includes:

a dividing unit that divides image data into a plurality of blocks;

a block extracting unit that extracts a pair of blocks from the divided block; and

an index extracting unit that extracts two feature indices of a first color component and two feature indices of a second color component which differs from the first color component from the pair of blocks, one of the two feature indices being extracted from one of the pair of blocks and the other of the two feature indices being extracted from the other of the pair of blocks, wherein

the embedding unit embeds a code into the pair of blocks, by changing at least one of the extracted two feature indices of the first color component of the pair of blocks based on a magnitude relationship between the extracted two feature indices of the second color component of the pair of blocks and a value determined by at least one of the extracted two feature indices of the second color component.

22. (CURRENTLY AMENDED) A method of embedding, using a processor, a code into an image data in an image data processing method, comprising:

dividing image data into a plurality of blocks;

extracting a pair of blocks from the plurality of blocks; and

extracting two feature indices of a first color component and two feature indices of a second color component which differs from the first color component from the pair of blocks, one of the two feature indices being extracted from one of the pair of blocks and the other of the two feature indices being extracted from the other of the pair of blocks, wherein

the embedding includes embedding the code into the pair of blocks of the image data, by changing at least one of the extracted two feature indices of the first color component of the pair of the blocks based on a magnitude relationship between the extracted two feature indices of the second color component of the pair of blocks and a value determined by at least one of the extracted two feature indices of the second color component.

23. (CANCELED)

24. (CURRENTLY AMENDED) A computer-readable recording medium that stores a computer program, that when executed by a computer, makes a the computer perform embedding a code into image data comprising:

dividing the image data into a plurality of blocks;

extracting a pair of blocks from the divided block; and

extracting two feature indices of a first color component and two feature indices of a second color component which differs from the first color component from the pair of ~~block~~ blocks, one of the two feature indices being extracted from one of the pair of blocks and the other of the two feature indices being extracted from the other of the pair of blocks, wherein

the embedding includes embedding the code into the pair of blocks of the image data, by changing at least one of the extracted two feature indices of the first color component of the pair of blocks based on a magnitude relationship between the extracted two feature indices of the second color component of the pair blocks and a value determined by at least one of the extracted two feature indices of the second color component.